

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: :  
Nakayoshi, et al. : Examiner: unknown  
Title: Silver-Filled Electrically Conductive : Preliminary Amendment  
Organosiloxane Compositions : Art Unit: unknown  
Serial No.: unknown : Confirmation No.: unknown  
Filed: :  
Docket No.: TSL 942 CON2 : Date: 17 January, 2002

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

The applicants respectfully request entry of the following preliminary amendments.

In the specification:

Please replace the paragraph at page 8, lines 16-20 with the following amended paragraph.

The characterizing feature of the present curable organosiloxane compositions is the presence of silver particles that have been treated with an organosilicon compound prior to being combined with the other ingredients of the curable organosiloxane composition. In preferred embodiments, the organosilicon compound which is used to pre-treat the silver particles is selected from the group consisting of (i) silanes containing at least one alkoxy group and (ii) organosiloxanes.

In the claims:

Please cancel claims 1-7.

Please add new claims 8-20.

8. A composition comprising the product obtained by blending to homogeneity:

(A) 100 parts by weight of a polyorganosiloxane containing at least two alkenyl radicals per molecule;

(B) an organohydrogensiloxane containing at least two silicon-bonded hydrogen atoms in each molecule, in a quantity sufficient to provide from 0.5 to 3 silicon-bonded hydrogen atoms per alkenyl radical in ingredient (A);

(C) from 50 to 2,000 parts by weight of finely divided silver particles pre-treated with an organosilicon compound selected from the group consisting of (i) silanes containing at least one alkoxy group and (ii) organosiloxanes;

(D) an amount sufficient to promote curing of said composition of a platinum catalyst;

(E) up to 20 weight percent, based on the weight of component (A), of ingredient (E), an organosilicon compound containing at least one silicon-bonded alkoxy group per molecule; and

(F) 0.001 to 5 weight parts, per 100 weight parts of ingredient (A), of a cure inhibitor.

9. The composition of claim 8, where ingredient (C)(i) comprises an alkoxysilane comprising:

- (a) methyltrimethoxysilane,
- (b) vinyltrimethoxysilane,
- (c) 3-glycidoxypropyltrimethoxysilane,
- (d) 3-methacryloxypropyltrimethoxysilane,
- (e) dimethyldimethoxysilane,
- (f) trimethylmethoxysilane,
- (g) trimethylethoxysilane,
- (h) tetramethoxysilane, and
- (i) tetraethoxysilane.

10. The composition of claim 8, where ingredient (C)(ii) comprises

- (a) a siloxane oligomer,
- (b) a linear polyorganosiloxane,
- (c) a cyclosiloxane,
- (d) a siloxane resin, or
- (e) a mixture thereof.

11. The composition of claim 8, where ingredient (C)(ii) comprises a siloxane oligomer comprising:

- (a) a silanol endblocked dimethylsiloxane oligomer,
- (b) a silanol endblocked dimethylsiloxane/methylvinylsiloxane co-oligomer,
- (c) a silanol endblocked methylvinylsiloxane oligomer, or
- (d) a silanol endblocked methylphenylsiloxane oligomer.

12. The composition of claim 8, where ingredient (C)(ii) comprises a linear polyorganosiloxane comprising:

- (a) a trimethylsiloxy endblocked polydimethylsiloxane,
- (b) a trimethylsiloxy endblocked dimethylsiloxane/ methylvinylsiloxane copolymer,
- (c) a trimethylsiloxy endblocked dimethylsiloxane/ methylphenylsiloxane copolymer,
- (d) a trimethylsiloxy endblocked polymethylhydrogensiloxane,
- (e) a trimethylsiloxy endblocked dimethylsiloxane/ methylhydrogen siloxane copolymer,
- (f) a silanol endblocked polydimethylsiloxane,
- (g) a silanol endblocked dimethylsiloxane/ methylvinylsiloxane copolymer,
- (h) a silanol endblocked dimethylsiloxane/ methylphenylsiloxane copolymer,
- (i) a silanol endblocked polydimethylhydrogensiloxane,
- (j) a silanol endblocked dimethylsiloxane/ methylhydrogensiloxane copolymer,
- (k) a dimethylvinylsiloxy endblocked polydimethylsiloxane,
- (l) a dimethylvinylsiloxy endblocked dimethylsiloxane/ methylvinylsiloxane copolymer,

- (m) a dimethylvinylsiloxyl endblocked dimethylsiloxane/ methylphenylsiloxane copolymer,
- (n) a dimethylhydrogensiloxyl endblocked polymethylhydrogensiloxane, or
- (o) a dimethylhydrogensiloxyl endblocked dimethylsiloxane/ methylhydrogensiloxane copolymer.

13. The composition of claim 8, where ingredient (C)(ii) comprises a cyclosiloxane comprising 1,3,5,7-tetramethylcyclotetrasiloxane or 1,3,5,7,9-pentamethylcyclopentasiloxane.

14. The composition of claim 8, where ingredient (C)(ii) comprises a silicone resin comprising:

- (a) a resin comprising  $R_3SiO_{1/2}$  and  $SiO_{4/2}$  units,
- (b) a resin comprising  $RSiO_{3/2}$  units,
- (c) a resin comprising  $R_2SiO_{2/2}$  and  $RSiO_{3/2}$  units, or
- (d) a resin comprising  $R_2SiO_{2/2}$ ,  $RSiO_{3/2}$ , and  $SiO_{4/2}$  units,

where each R represents a substituted or unsubstituted monovalent hydrocarbon.

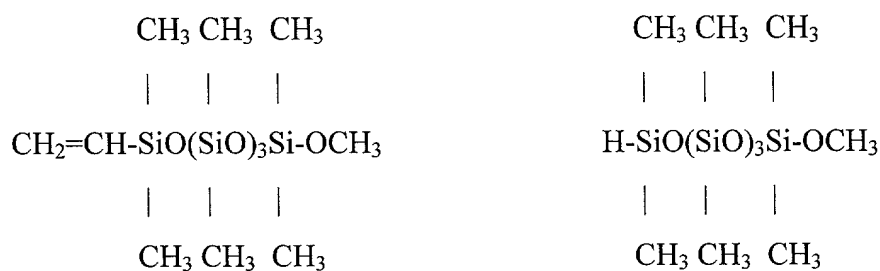
15. The composition of claim 8, where the composition contains 0.5 to 8 parts by weight of ingredient (E), per 100 parts by weight of ingredient (A), and ingredient (E) further comprises at least one substituent selected from the group consisting of silicon bonded hydrogen, silicon-bonded vinyl, epoxy and trialkoxysilylalkyl radicals.

16. The composition of claim 8, where ingredient (E) comprises an alkoxysilane comprising:

- (i) tetramethoxysilane,
- (ii) tetraethoxysilane,
- (iii) dimethyldimethoxysilane,
- (iv) methylphenyldimethoxysilane,
- (v) methylphenyldiethoxysilane,
- (vi) phenyltrimethoxysilane,
- (vii) methyltrimethoxysilane,
- (viii) methyltriethoxysilane,

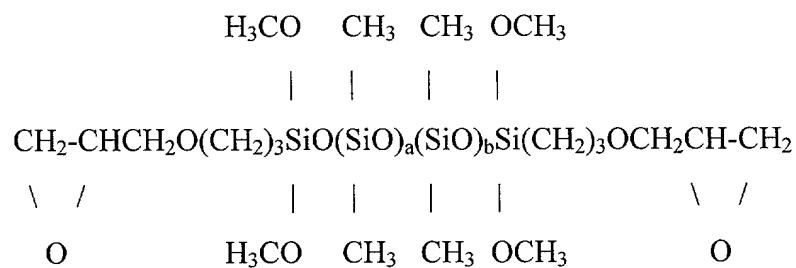
- (ix) vinyltrimethoxysilane,
- (x) allyltrimethoxysilane,
- (xi) allyltriethoxysilane,
- (xii) 3-glycidoxypropyltrimethoxysilane, or
- (xiii) 3-methacryloxypropyltrimethoxysilane.

17. The composition of claim 8, where ingredient (E) comprises an organosilicon compound comprising:

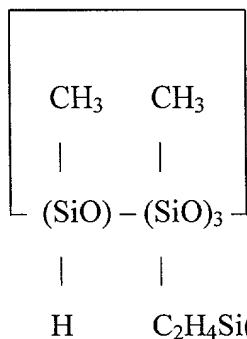


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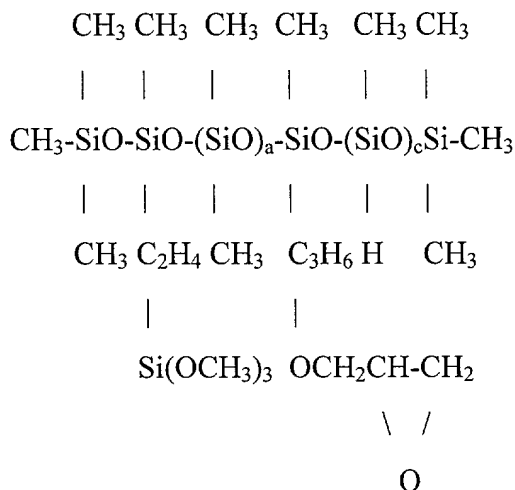
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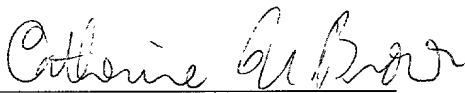


18. The composition of claim 8, where ingredient (F) comprises an alkynyl alcohol, an ene-yne compound, 1,3,5,7-tetramethyl-1,3,5,7-tetravinylcyclotetrasiloxane, 1,3,5,7-tetramethyl-1,3,5,7-tetrahexenylcyclotetrasiloxane, or benzotriazole.

19. The composition of claim 8, where ingredient (B) has at least one silicon-bonded alkoxy group per molecule and ingredient (E) has not more than one silicon-bonded hydrogen atom per molecule.

20. The composition of claim 8 when cured on a solid substrate.

Respectfully Submitted,  
DOW CORNING CORPORATION

  
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Version with Markings to Show Changes Made

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